

AMENDMENTS TO THE CLAIMS

1. (currently amended) Metalliferous, hydrogen-storing material which contains a ~~eatalysing~~ catalyzing agent for its hydrogenation or dehydrogenation, ~~eharakterised in that wherein~~ the ~~eatalysing~~ catalyzing agent is a metal carbonate.

2. (currently amended) Metalliferous material according to claim 1, ~~eharakterised in that wherein~~ the metal carbonate consists of mixtures of metal carbonates.

3. (currently amended) Metalliferous material according to claim 1, ~~eharakterised in that wherein~~ the metal carbonate consists of mixed carbonates of metals.

4. (currently amended) Metalliferous material according to ~~one or several of claims 1 to 3,~~ characterised in that claim 1, wherein the metal carbonate is a carbonate of an elemental metal.

5. (currently amended) Metalliferous material according to claim 4, ~~eharakterised in that wherein~~ the metal carbonate is the carbonate of ~~the a~~ metals Li, Be, B, Na, Mg, Al, Si, K, Ca, Sc, Ti, V, Cr, Mn, Fe, Co, Ni, Cu, Zn, Ga, Ge, Rb, Sr, Y, Zr, Nb, Mo, Tc, Ru, Rh, Pd, Ag, Cd, In, Sn, Cs, Ba, La, Hf, Ta, W, Re, Os, Ir, Pt, Au, Hg, Tl, Pb, Fr, Ra, Ce, Pr, Nd, Pm, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, Lu, Th, Pa, U, Np, Pu, Am, Cm, Bk, Cf, Es, Fm, Md, No, Lw, and mixtures thereof.

6. (currently amended) Metalliferous material according to ~~one or several of claims 1 to 4,~~ characterised in that claim 1, wherein the metal carbonate is the carbonate of the metals or metal mixtures of the rare earths.

7. (currently amended) Metalliferous material according to ~~one or several of claims 1 to 6,~~ characterised in that claim 1, wherein the metal carbonate is formed by different metal carbonates of the same metal.

8. (currently amended) Metalliferous material according to ~~one or several of claims 1 to 7, characterised that~~ claim 1, wherein the carbonate is formed in-situ from the storage ~~the hydrogen-storing~~ material by the addition of an organic solvent.

9. (currently amended) Metalliferous material according to ~~one or several of claims 1 to 8, characterised in that~~ claim 1, wherein this exhibits a nanocrystalline structure.

10. (currently amended) Metalliferous material according to ~~one or several of claims 1 to 9, characterised in that~~ claim 1, wherein the ~~eatalysing~~ catalyzing agent exhibits a nanocrystalline structure.

11. (currently amended) Metalliferous material according to ~~one or several of claims 1 to 10, characterised in that~~ claim 1, wherein the carbonate content is between 0.005 mole% and 20 mole%.

12. (currently amended) Process for the production of a metalliferous, hydrogen-storing material according to ~~one or several of claims 1 to 11, characterised in that~~ claim 1, wherein the metalliferous material and/or the ~~eatalysing~~ catalyzing agent is or are subjected to a mechanical milling process.

13. (currently amended) Process according to claim 10, ~~characterised in that~~ wherein the milling process is carried out for periods of different lengths depending on the metalliferous material and/or ~~eatalysing~~ catalyzing agent.

14. (currently amended) Process according to ~~one or both of claims 12 or 13, characterised in that~~ claim 12, wherein the metalliferous material is first subjected to the milling process and subsequently, following the addition of the ~~eatalysing~~ catalyzing agent to it, the milling process is continued with respect to the metalliferous material and the ~~eatalysing~~ catalyzing agent.

15. (currently amended) Process according to ~~one or both of claims 12 or 13,~~
~~characterised in that catalysing claim 12, wherein the catalyzing agent~~ is first subjected to the
milling process and subsequently, following the addition of the metalliferous material to it,
the milling process is continued with respect to the ~~eatalysing~~ catalyzing agent and the
metalliferous material.

16. (currently amended) Process according to ~~one or both of claims 12 or 13,~~
~~characterised in that claim 12, wherein~~ the metalliferous material and the ~~eatalysing~~
catalyzing agent are subjected separately to a milling process respectively and subsequently
mixed.

17. (currently amended) Process according to ~~one or both of claims 12 or 13,~~
~~characterised in that claim 12, wherein~~ the metalliferous material and the ~~eatalysing~~
catalyzing agent are ground jointly.

18. (currently amended) Process according to ~~one or several of claims 12 to 17,~~
~~characterised in that claim 12, wherein~~ the duration of the milling process is in the range of
from 1 ~~min-minute~~ minute to 200 hours.

19. (currently amended) Process according to claim 18, ~~characterised in that~~
wherein the duration of the milling process is in the range of from 20 hours to 100 hours.

20. (currently amended) Process according to ~~one or several of claims 12 to 19,~~
~~characterised in that claim 12, wherein~~ the milling process is carried out under an inert gas
atmosphere.

21. (currently amended) Process according to claim 20, ~~characterised in that~~
wherein the inert gas is argon.

22. (currently amended) Process according to ~~one or several of claims 12 to 20,~~
~~characterised in that~~ claim 12, wherein the milling process is carried out with an addition of
an organic solvent.

23. (currently amended) Process according to ~~one or several claims 12 to 19, 22,~~
~~characterised in that~~ claim 12, wherein the milling process is carried out under a CO and/or
CO₂-containing atmosphere.

24. (New) Process according to claim 13, wherein the metalliferous material is
first subjected to the milling process and subsequently, following the addition of the
catalyzing agent to it, the milling process is continued with respect to the metalliferous
material and the catalyzing agent.

25. (New) Process according to claim 13, wherein the catalyzing agent is first
subjected to the milling process and subsequently, following the addition of the metalliferous
material to it, the milling process is continued with respect to the catalyzing agent and the
metalliferous material.

26. (New) Process according to claim 13, wherein the metalliferous material and
the catalyzing agent are subjected separately to a milling process respectively and
subsequently mixed.

27. (New) Process according to claim 13, wherein the metalliferous material and
the catalyzing agent are ground jointly.